WE CLAIM:

1. An isolated DNA sequence encoding a eukaryotic AHAS small subunit protein, wherein said DNA sequence is not isolatable from *Nicotiana plumbaginifolia* or maize.

2. The isolated DNA sequence of claim 1 wherein said AHAS small subunit protein is a plant AHAS small subunit protein.

3. A plant expression vector comprising a promoter expressible in a plant cell operably linked to the DNA sequence of claim 1.

4. A transgenic plant whose genetic complement comprises the plant expression vector of claim 3.

5. A progeny plant of the transgenic plant of claim 4, wherein said progeny plant comprises said plant expression vector.

6. An isolated DNA sequence encoding the amino acid sequence set forth in SEQ ID NO:2.

7. A plant expression vector comprising a promoter expressible in a plant cell operably linked to the DNA sequence of claim 6.

8. A transgenic plant whose genetic complement comprises the plant expression vector of claim 7.

9. A progeny plant of the transgenic plant of claim 8, wherein said progeny plant comprises said plant expression vector.

10. A plant expression vector comprising a promoter expressible in a plant cell operably linked to the DNA sequence set forth in SEQ ID NO:1.

11. A transgenic plant whose genetic complement comprises the plant expression vector of claim 10.

12. A progeny plant of the transgenic plant of claim 11, wherein said progeny plant comprises said plant expression vector.

13. A transgenic plant whose genetic complement comprises a heterologous promoter expressible in a plant cell operably linked to a DNA sequence encoding a small subunit of an *Arabidopsis* AHAS protein.

14. A progeny plant of the transgenic plant of claim 13, wherein said progeny plant comprises said heterologous promoter operably linked to said DNA sequence.

15. An isolated DNA sequence comprising nucleotides 1-757 of SEQ ID NO:3.

16. A plant expression vector comprising a promoter operably linked to a heterologous DNA sequence, said promoter comprising the DNA sequence of claim 15.

17. The plant expression vector of claim 16, wherein the heterologous DNA sequence encodes an AHAS large subunit protein.

18. A transgenic plant whose genetic complement comprises the plant expression vector of claim 16.

19. A progeny plant of the transgenic plant of claim 18, wherein said progeny plant comprises said plant expression vector.

20. A method for expressing a heterologous DNA sequence in a plant cell comprising transforming a plant cell with the expression vector of claim 16.

21. A transformed plant cell produced by the method of claim 20.